



# Ø BEAT

P.O.BOX - 1797  
COLO. SPRINGS,  
COLORADO

JUNE 1961

## AUCTION - AUCTION - AUCTION

Wonderful opportunity to all hams in the area to get the things you need at the prices you want to pay. Those of you who have some extra items can also get them out of the junk box and use the money to get other items you need.

Traditionally, the PPRAA has been holding an auction once each year. The last one we had in February was so successful that by popular demand we will have a second one this year. Wednesday June 14, 1961, will be the scene of the biggest and best auction in the club's history. There has been much interest expressed and the turn out should be good. Even if you don't buy, come and see the auctioneers get a sore throat. THE AUCTION WILL BE HELD AT THE Y M C A YOUTH CENTER, BIJOU AND WEBER STREETS, WEDNESDAY JUNE 14, 1961, PROMPTLY AT 2000 MST (8:00 PM). Plan to be there and tell all your friends to be there. Don't forget to bring lots of stuff to sell and/or money to buy!! The same rules as the last auction will apply since they worked out so well. They are listed below for those who may have forgotten or didn't read the last published ones.

All items to be auctioned must be in the hands of the auction committee no later than 7:45 PM in order that the auction may be started promptly at 8:00. Items accepted for auction by the committee will be auctioned without regard for minimum price. Anyone who wishes to bid on his own items may do so. This would be to protect the item from sale for a price far below the owner's valuation.

The following procedure will govern the handling of items offered for auction: The auction committee will attach a three part ticket to each item. The owner's call or name will be placed on the bottom half of the ticket. The top copy of the ticket will be given to the owner.

The auctioneer will put the buyer's call and the price on the top half and the bottom half of the ticket. The item with the top half of the ticket attached goes to the buyer. The bottom half goes to the cashier.

The buyer, sometime during the evening, pays the cashier the total amount of his purchases. When all of the cash owed to the club and the books balance, the Treasurer will mail checks to the owners of the items auctioned. This should be within a week or 10 days.

The club will collect a commission of approximately 10% on all items auctioned. The schedule is listed below:

UP TO 1.00	.10	3.01 - 3.50	.35
1.01 - 1.50	.15	3.51 - 4.00	.40
1.51 - 2.00	.20	4.01 - 4.50	.45
2.01 - 2.50	.25	4.51 - 5.00	.50
2.51 - 3.00	.30	OVER 5.00	10%

## GOSSIP HEARD ON THE AIR and IN OTHER PLACES

Don Gibb, KØVRK has retired from the Navy and has left Colorado Springs for Thule for a time. Don, we wish you lots of luck and will be listening for you on the air . . . . . Another of our illustrious hams is leaving us, also for a DX location. Dick Coburn, KØTJU will be in France for the next several years. Dick, we hope that the Apache that you just finished will work OK on the French power lines. Keep a lookout for the Springs gang from "F" land . . . Mac MacAdams has been struggling with the completion of the Apache he is building. Mac, if you would just stay in town for two consecutive days you might get it finished. The PPRAA inspector who recently checked up on Mac's progress reports that it is 99 1/2% complete. We are waiting to hear it on the air real soon . . . . . Dick KØTBE finally got his 200V we have been hearing about for months and reports that it is really a good piece of gear. Rumor is that WWV calls on Dick to check their frequency standards . . . . . We now have one less mobile in the area. Floyd Spencer, K8APP/Ø wrapped up his nice new car and wound up in the hospital for several weeks. We hear that Floyd is doing fine and will be on the air from home real soon; not mobile for awhile. Glad you're doing better Floyd . . . . . RTTY will soon be rattling from the shack of W1ACH/KØWBB, Dick who has been working hot and heavy on this project in between building up a Seneca and a reportedly 18-30 element beam for 2 meters . . . . . Fred KØLZF has moved to a new QTH on Winston; this is only two blocks from Joe KØGBS. Wonder if they will be able to hear each other? Fred has his eye on a tall pole in the area and is waiting for a dark night to put up his antennae. Need any help Fred? . . . . . Our Secretary Wally has also moved to get a better location for his antennae. If you put out a much better signal Wally, we will all have to get attenuators for our receivers. Wally didn't move very far, just pulled his mobile home to the other side of the lot closer to the clear area . . . . . Newly arrived in town is Scotty Kenton, KØTRM, who came here from Emporia Kansas. Scotty is one of our hard working Boy Scout executives and has been quite busy buying and moving into a new home. Back in Kansas Scotty was very active in MARS and was the 'Operator-of-the-Month' for the state of Kansas for January '61. Welcome to the Springs, Scotty, and we are all looking forward to seeing you on the air . . . . . Pony, WØYJO and Joe, KØGBS, have hit the jackpot from the Army MARS. They each got a complete 500 watt am/cw rig that covers 300kc to 25mc and is xtal controlled and autotuned. There is one small problem, however, tech manuals did not come with the xmttrs so they don't know which end is up. Anybody got any dope on the AN/URT 4. Either experience or the manuals or know where to get them would be greatly appreciated. . . . . We've reported before that Jack Kayne KØRNT was leaving for Germany but that proved to be a false alarm. Looks like he will actually leave this summer. We need some of these DL QSL's, Jack, so please get going and get on the air real soon . . . . . WA6POL, formerly WØHHR, Harold Stewart returns to the Springs in July. He has been in Palo Alto Cal. Hope you get the HHR back Harold . . . . . Well, it finally happened. Jim Reynolds WØJMB has been heard on fone, AM and 75 meters at that. What happened, Jim, did you break the CW arm or are you trying for double DXCC on fone to equal the CW record you have set. Maybe you ought to try SSB before you go too far . . . . . The Civil Defense Net meets at 0730 MST the 1st and 3rd Sundays of each month on 3885KC. The net is open to members of RACES for their 30 Min drill . . . . . Francis Emery studied so hard for the General Class exam that she dreamed she was an electron and got lost trying to get through a circuit. We wish her luck on the exam. Husband Don passed his and is anxiously awaiting his call . . . . .

# HOW TO USE AN OSCILLOSCOPE

## JOE PATALIVE W3CEQ/Ø and DICK BASSLER KØTBE

Several issues ago the ØBEAT carried a want ad asking for help in the design and use of oscilloscopes as modulation monitors. The response was heartwarming. The authors gleaned so much data on this project that they thought this should be shared with the other members of the PPRAA. So many contributed to this and so many could benefit from the various solutions. There have been many requests for this information.

We all know that the important thing in modulation monitoring is to be sure that the emitted signal is as clean and free from spurious emissions as the state of the art will permit. The trace on most scopes is generated by a saw tooth voltage. Since the decay time of this voltage cannot be reduced to zero, it appears on the scope as a return trace, sometimes called a "flyback trace"; sometimes it is not called that. Unfortunately this trace gives very confusing information.<sup>1</sup> It permits the appearance on the scope of unwanted target "echoes" that arrive after the forward stroke has ended, except in those cases where blanking of the third order is injected, then they may arrive before the forward stroke. This should clearly indicate to the reader why inverse feedback to the "Z" terminals should be applied in the positive mode rather than in the negative amplitude or direct current mode.<sup>2</sup> The application of these principles is really very simple and no technical knowledge is necessary to apply them. Simply connect the vertical plate of the scope to the output of the single-swing blocking oscillator in series with the trigger pulse potentiometer. If this results in equalization of the circuit constants you need go no further in this phase of the hookup.

On the other hand, if equalization is not realized, a monosyllabic multivibrator waveform must be used. Since this is well known to most technicians details are not given in this article. If needed they can be found in any good electronics handbook. Now that the preliminary circuits are hooked up you should experience no difficulty in the simple steps to follow. First, if will be necessary to obtain a sample of rf from the final amplifier and also a sample of the audio. These are hooked up to the scope in the conventional manner. This will give you either non-sinusoidal or deflection type lissajous patterns which are easy to analyze by direct comparative techniques. 3

**Example:** With the sine wave source adjusted to produce a 3-division deflection, v.t.v.m. reads 20 volts, rms. A-F wave has peak-to-peak amplitude of  $20 \times 2.828 = 56.56$  volts. Peak amplitude of non-sinusoidal wave is also 56.56 volts. After a little practice with this method of measurement, it will become evident that, while it is desirable to have the peak-to-peak value of the sine wave equal to the voltage difference being measured, this is not altogether necessary. The authors cannot enter into any correspondence on these simple techniques because the answers are readily available in any handbook.

1. The Cathode Ray Oscillograph, Dumont Labs, 1939
2. Described by L. E. Rapp, WIOU, QST April 1947, pp. 124-126
3. Journal of the IRE, February 30, 1928, pp. 96-147 incl.

## FUTURE ACTIVITIES

The week end of 24-25 June will see us hard at FIELD DAY . . . . This is the opportunity for all of us to get out and try the emergency gear under actual field conditions. There are classes for mobiles, battery operated portables, gasoline generator powered rigs, and for those who can't get away there is a class for the stay at home types. The important thing would be to get out and operate some way during the contest period. Full details are given in the June issue of QST. Two years ago the PPRAA entered about a dozen entries in the SWEEPSTAKES. Last year none. The 1961 SS will be held in November. Start planning now to have all antennae, transmitters, and receivers in top condition and let's get a first class showing for the PPRAA again this year.

## ARRL MEMBERSHIP.

Carl Smith, WØBWJ, the Director of the Rocky Mountain Area for the ARRL reports in a recent bulletin that there are proportionately not very many members of the ARRL in our area. Are you aware of the things that the League does for the amateur? The ARRL is your spokesman in dealings with the FCC on matters concerning the privileges we enjoy. Without your support and mine the League will not be able to truly represent us. There is another advantage, and a big one, of joining the ARRL and that is that a subscription to QST goes along with it. It is hard to see how you can keep abreast of activities, rule changes and the latest technical information without getting QST each month. Did you know that if you join thru the PPRAA (or renew) the club gets a 10% commission on each deal. See Wally or Bill at the next meeting and get yours now.

## CLASSES AT THE YMCA

The interest shown by the community in the classes in amateur radio being conducted by your PPRAA has been refreshing. There have been many would be hams enrolled in these classes. A rather large proportion of YLs was an interesting note and nice for the instructors. Of this group enrolled, as would be expected, a few have dropped out, but most have already passed their NOVICE exams and several have made the grade in the GENERAL class. A list of the instructors includes the really active members of the PPRAA . . . . Wally KØWMD, Larry WØBES, Pony WØYJO, Joe KØGBS, John KØSLN, Dick KØTBE, Joe W3CEQ/Ø, Farmer KNØECJ, Gil KØREO, Bill KØCEN, Fred KØLZF.

Without this grand bunch of guys this successful program would not have been possible. They have devoted much more than just the time involved in the class sessions. The YMCA is well pleased with the progress and the interest shown in the program. We would be remiss without a few good words about our good friend and spark plug in this course . . . . we of course refer to AL DECHENNE, the Youth Director at the "Y". Al has handled all the messy administrative details and always been around in the evenings to hold our heads and listen to our problems. Al, you have been a real inspiration to the program.

## FOR SALE - WANTED

GLOBE SCOUT 680-A, 80 thru 6 meters, 50 watts am, 65 watts cw, excellent condition. Also Heathkit VFO, w/own regulated power supply. Call Dan, KØVDM ME 3-7417.

WANTED: 500 feet #12 soft drawn copper wire either bare or enamelled, will trade RG-11 coax or what you need. Dick KØTBE, ME 5-3167.

Selling in excellent condition the famous G4ZU beam, very light weight; can be handled by any TV rotator. Just the thing for cramped space when you need a beam for 10-15-20 meters. Joe W3CEQ/Ø, ME 5-8911 Ext. 6573.

WANTED: Reporters for the ØBEAT. . . . this issue is an example of what can be done with a little effort. There is always the hue and cry that the same names appear each month. . . . we-l-l-l-l-l-l, they are the ones who are known best to ye editor. What we need is one or two reporters for each group active on the air. For example: the Ragchewers should appoint one of them to collect news among their group, the 3885 group is another, the SSB boys on 20 is another group, the 144mc gang always has news but hard to get it out of them. No particular writing skill is required . . . . In fact, you don't even have to know how to write. . . . please, gang, let's get with this project . . . . contact Dick KØTBE or Wally KØWMD at the next meeting or by land line. . . . .

FOR SALE: Johnson Ranger, HQ-110, Hornet 3 band beam, CDR rotator, B&W low pass filter, Dow Key electronic key, Turner dynamic mike, Coax cable, \$400. Dr. Kearney, ME 5-2551. . .

## 39TH ANNUAL PIKES PEAK HILL CLIMB

The Pikes Peak Radio Amateur Association and its members have again been requested to provide safety and timing communications circuits for the 39th Annual Pikes Peak Hill Climb, on July 4th. The Hill Climb is a nationally acclaimed and sponsored event and offers the PPRAA Membership an opportunity to provide both a community and personal service not often offered to such a group as ours. Everyone can help in one way or the other by offering his services or the use of equipment.

The drivers in the Hill Climb event have been most grateful of the time and efforts of the PPRAA and have come to depend upon the judgment and the skills of each member who has participated in past years. Drivers are aware that stations are strategically located along the route where the roadway may be observed and any mishap or other unusual incident may be reported to the officials. They, more than anyone, seek and need our help.

Volunteers will be accepted for all positions and offers of equipment will not be refused. A minimum of eleven mobile and portable stations are required to man the safety net on 75-meters. At least two 2-meter stations and two 10-meter stations are required for the timing circuit. Second operators are a must and back-up equipment and operators are definitely required. We intend to try something new this year since there is a considerable interest in 2-meter operation developing in Colorado Springs. The timing circuit will be conducted, if possible, over a 2-meter circuit. However, we need the 10-meter back-up circuit just in case the 2-meter operation fails to work out satisfactorily.

Time trials will be run on 1 July from 0600 to 0900. Volunteers for the time trials are needed and will be scheduled immediately. If you have any desire to offer mobile equipment, a portable kit, emergency power equipment, your own services or services as a second operator, please contact "Nip" Neppel, WØCVG, ME 2-6519 or "Nick" Carter, K6RKG/Ø, ME 3-7024.

## GOOD MEETING IN MAY

The May meeting was one at which all who attended had lots of fun. The mounted rangers made a pitch for communications help for their rescue missions. Jack Hayne has more dope on what their requirements are and can fill you in on how you might help if you are horse-minded. Cecil Wood WØTV our CD expert agreed to offer his help to get them on the way. The Hill Climb was the point of some discussion. For the first time in years we received a letter asking for our services. The committee is under way to set up the people to do it. Look for the article on the Hill Climb elsewhere in the ØBEAT for more poop on this. The refreshment committee as usual did a bang up job on coffee and calorie laden pastries.

## 1961 ANNUAL MEETING, BOARD OF DIRECTORS AMERICAN RADIO RELAY LEAGUE

Carl Smith, ARRL Rocky Mountain Division Director, writing in regard to the 5 May Directors' meeting at Anaheim Calif advises as follows:

"The formal minutes of the Board will be published in July QST, and I will have a membership letter in the mail soon that will summarize the actions of the Board. For your information, the Board did not consider any action on "extra privileges" in view of a report by the General Manager concerning FCC attitude and action on Extra-Class licenses. The proposal to define and delegate definite duties for the Vice-Director was defeated as was the proposal for a four year term for Directors. The Board did formally instruct the General Manager to pursue with increased vigor the expansion of operating privileges on 160 meters, and to make every effort through proper governmental agencies to obtain reciprocal operating privileges with friendly foreign countries".

NOTE: Highlights of the meeting will appear in the June QST. Copy of the full minutes is available in the hands of your Ass't Director, K4ILF/Ø, phone ME 5-5981.



P. O. BOX - 1797  
COLO. SPRINGS,  
COLORADO

JOHN WALD  
K4ILF  
1413 NORTHVIEW DRIVE  
COLORADO SPRINGS, COLO.